

FIRST REPORT TO THE STATE OF MARYLAND
UNDER PUBLIC SAFETY ARTICLE § 3-508
2012 Electronic Control Device (ECD) Discharges Analysis

Maryland Statistical Analysis Center,
Governor's Office of Crime Control & Prevention



September 12, 2013

INTRODUCTION

On April 12, 2011 Governor O'Malley signed into law Senate Bill 652/House Bill 507, which was subsequently enacted under the *Annotated Code of Maryland, Public Safety Article § 3-508*. This law requires law enforcement agencies that issue Electronic Control Devices (ECDs)¹, also known as tasers, to report certain information regarding the use of those devices to the Maryland Statistical Analysis Center (MSAC) located in the Governor's Office of Crime Control & Prevention (GOCCP), under Executive Order 01.01.2007.04. MSAC and the Police and Correctional Training Commissions (PCTC) worked with law enforcement and legal representatives to develop a standardized, efficient, user-friendly format to record and report data required under this law.

METHODOLOGY

This report represents all ECD discharges by law enforcement during the 2012 calendar year that were reported to MSAC. The law requires the submission of annual ECD data to MSAC by March 31st of the following year. All data sets were received in an excel format, as required, and later combined, merged, standardized, and analyzed using IBM SPSS (Statistical Package for the Social Sciences) Statistics version 21.0 to formulate this report. IBM SPSS Statistics version 21.0 is a system package widely accepted and used by researchers and social scientists.

For the purpose of this report, an ECD discharge means an ECD was fired at a person; it does not include an ECD that was fired during a training exercise. Also, accidental discharges, as well as an ECD fired at an animal, are not included in the report. Law enforcement agencies were required to electronically submit verification to MSAC regardless of whether the agency issued ECDs to its officers. MSAC received 100% compliance from all law enforcement agencies that were required to report. Law enforcement agencies that issued and used ECDs reported the following data:

- The number of times an ECD was discharged by the agency in the past year;
- The time, date, and location (zip code) of the discharge;
- The type of incident (e.g. non-criminal, criminal, or traffic stop) in which the person against whom the ECD was discharged was involved prior to the discharge;
- The reason for each discharge (e.g. non-threatening non-compliance, threat of force, and use of force);
- The type of mode used (e.g. probe, drive stun, or both) of the discharge;
- The number of ECD cycles, the duration of each cycle, and the duration between cycles of the discharge;

¹ According to the *Annotated Code of Maryland, Public Safety Article, § 3-58 (A)(3)*, an Electronic Control Device is defined as a portable device designed as a weapon capable of injuring, immobilizing, or inflicting pain on an individual by the discharge of an electrical current.

- The point of impact of each discharge (e.g., arm, back torso, buttocks, front torso, groin/hip, head, leg, neck, side, clothing, or miss);
- The race, gender, and age, of each person against whom the ECD was discharged;
- The type of weapon (e.g., firearm, edged, blunt force, or other), if any, possessed by the person against whom the ECD was discharged, and the threat of any weapon;
- Any injury or death resulting from the discharge other than punctures or lacerations caused by the ECD contact or the removal of ECD probes; and
- The type of medical care, if any, provided to the person against whom the ECD was discharged, other than the treatment for punctures or lacerations caused by the ECD contact or the removal of ECD probes.

RESULTS

In calendar year 2012, a total of 1,068 ECD discharges were reported by 65 law enforcement agencies. Another 27 agencies used ECDs but did not report any discharges during the reporting period. All remaining agencies reported that ECDs were not issued to officers and therefore are exempt from reporting and were excluded from the analysis. All law enforcement agencies that use ECDs in the State of Maryland (n = 92) will be required to report data to MSAC indefinitely.

Table 1. Number of ECD Discharges and the Percent of Total Discharges by Police Agency (n = 92)

Agency	Frequency	Percent	Agency	Frequency	Percent
Aberdeen Police Department	16	1.1%	Harford County Sheriff's Office	22	2.1%
Allegany County Sheriff's Office	3	0.3%	Havre De Grace Police Department	7	0.7%
Annapolis Police Department	13	1.2%	Howard County Police Department	12	1.1%
Anne Arundel County Police Department	72	6.7%	Hurlock Police Department	0	0.0%
Anne Arundel County Sheriff's Office	2	0.2%	Hyattsville Police Department	5	0.5%
Baltimore County Police Department	134	12.5%	Kent County Sheriff's Office	5	0.5%
Baltimore County Sheriff's Office	0	0.0%	La Plata Police Department	7	0.7%
Baltimore Environmental Police	0	0.0%	Landover Hills Police Department	0	0.0%
Baltimore Police Department	257	24.1%	Laurel Police Department	15	1.4%
Belair Police Department	1	0.1%	Manchester Police Department	0	0.0%
Berlin Police Department	1	0.1%	Maryland State Police	0	0.0%
Boonsboro Police Department	0	0.0%	Maryland Transportation Authority	5	0.5%
Brentwood Police Department	0	0.0%	MNCPP Montgomery County	1	0.1%
Brunswick Police Department	0	0.0%	MNCPP Prince George's County	6	0.6%
Bowie Police Department	3	0.3%	Montgomery County Police Department	120	11.2%
Calvert County Sheriff's Office	14	1.3%	Montgomery County Sheriff's Office	3	0.3%
Cambridge Police Department	6	0.6%	Morningside Police Department	0	0.0%

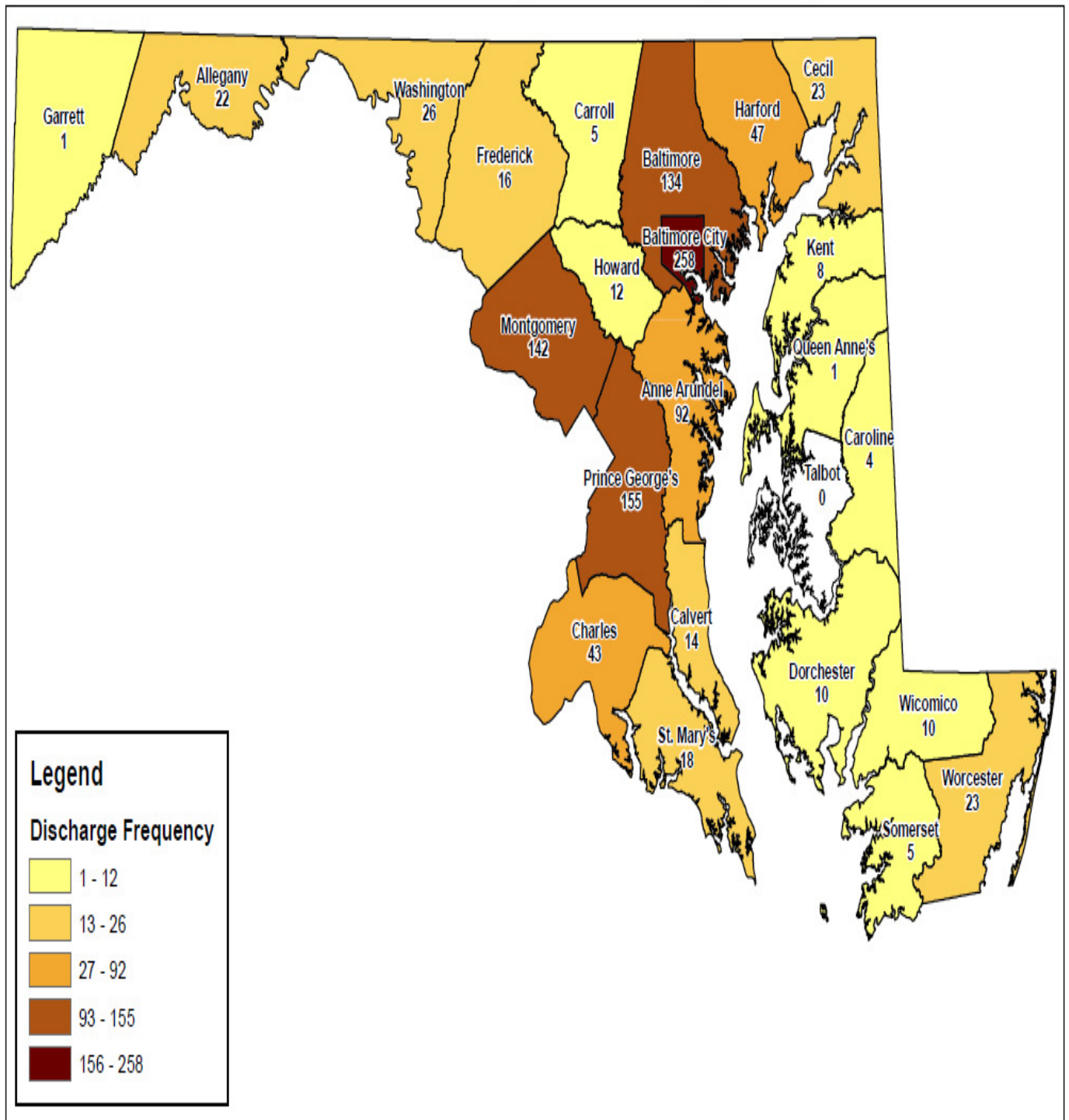
Capitol Heights Police Department	1	0.1%	Mount Rainier Police Department	5	0.5%
Caroline County Sheriff's Office	2	0.2%	New Carrollton Police Department	8	0.7%
Cecil County Sheriff's Office	8	0.7%	North East Police Department	0	0.0%
Centreville Police Department	0	0.0%	Oakland Police Department	0	0.0%
Charles County Sheriff's Office	36	3.4%	Ocean City Police Department	19	1.8%
Chestertown Police Department	3	0.3%	Oxford Police Department	0	0.0%
Cheverly Police Department	3	0.3%	Perryville Police Department	5	1.5%
Colmar Manor Police Department	0	0.0%	Pocomoke City Police Department	0	0.0%
Cottage City Police Department	0	0.0%	Prince George's County Police Department	93	8.7%
Crisfield Police Department	0	0.0%	Prince George's County Sheriff's Office	6	0.6%
Crofton Police Department	1	0.1%	Princess Anne Police Department	3	0.3%
Cumberland Police Department	16	1.5%	Queen Anne's Sheriff's Office	1	0.1%
Delmar Police Department	1	0.1%	Ridgely Police Department	0	0.0%
Denton Police Department	0	0.0%	Rising Sun Police Department	1	0.1%
District Heights Police Department	0	0.0%	Riverdale Park Police Department	6	0.6%
Dorchester County Sheriff's Office	4	0.4%	Rockville Police Department	8	0.7%
Edmonton Police Department	0	0.0%	Seat Pleasant Police Department	0	0.0%
Elkton Police Department	8	0.7%	Smithsburg Police Department	1	0.1%
Federsburg Police Department	2	0.2%	Snow Hill Police Department	0	0.0%
Frederick County Sheriff's Office	10	0.9%	Somerset County Sheriff's Office	2	0.2%
Frederick Police Department	5	0.5%	St. Mary's County Sheriff's Office	18	1.7%
Frostburg Police Department	3	0.2%	Sykesville Police Department	1	0.1%
Fruitland Police Department	0	0.0%	Takoma Park Police Department	3	0.3%
Gaithersburg Police Department	7	0.7%	Thurmont Police Department	1	0.1%
Garrett County Sheriff's Office	1	0.1%	University Park Police Department	1	0.1%
Greenbelt Police Department	4	0.4%	Washington County Sheriff's Office	15	1.4%
Greensboro Police Department	0	0.0%	Westminster Police Department	4	0.4%
Hagerstown Police Department	10	0.9%	Wicomico County Sheriff's Office	9	0.8%
Hancock Police Department	0	0.0%	Worcester County Sheriff's Office	3	0.3%

Location of ECD Discharge

The two maps below depict the location of each ECD discharge by the county and zip code respectively. At least one ECD discharge occurred in every county except Talbot County with the majority 64.4% in the Metro Region.² The number of ECD discharges per zip code ranged from 1 to 258 in 2012.

² The "Metro" area is defined by the following counties in Maryland: Anne Arundel, Baltimore, Howard, Prince George's, and Montgomery Counties as well as Baltimore City.

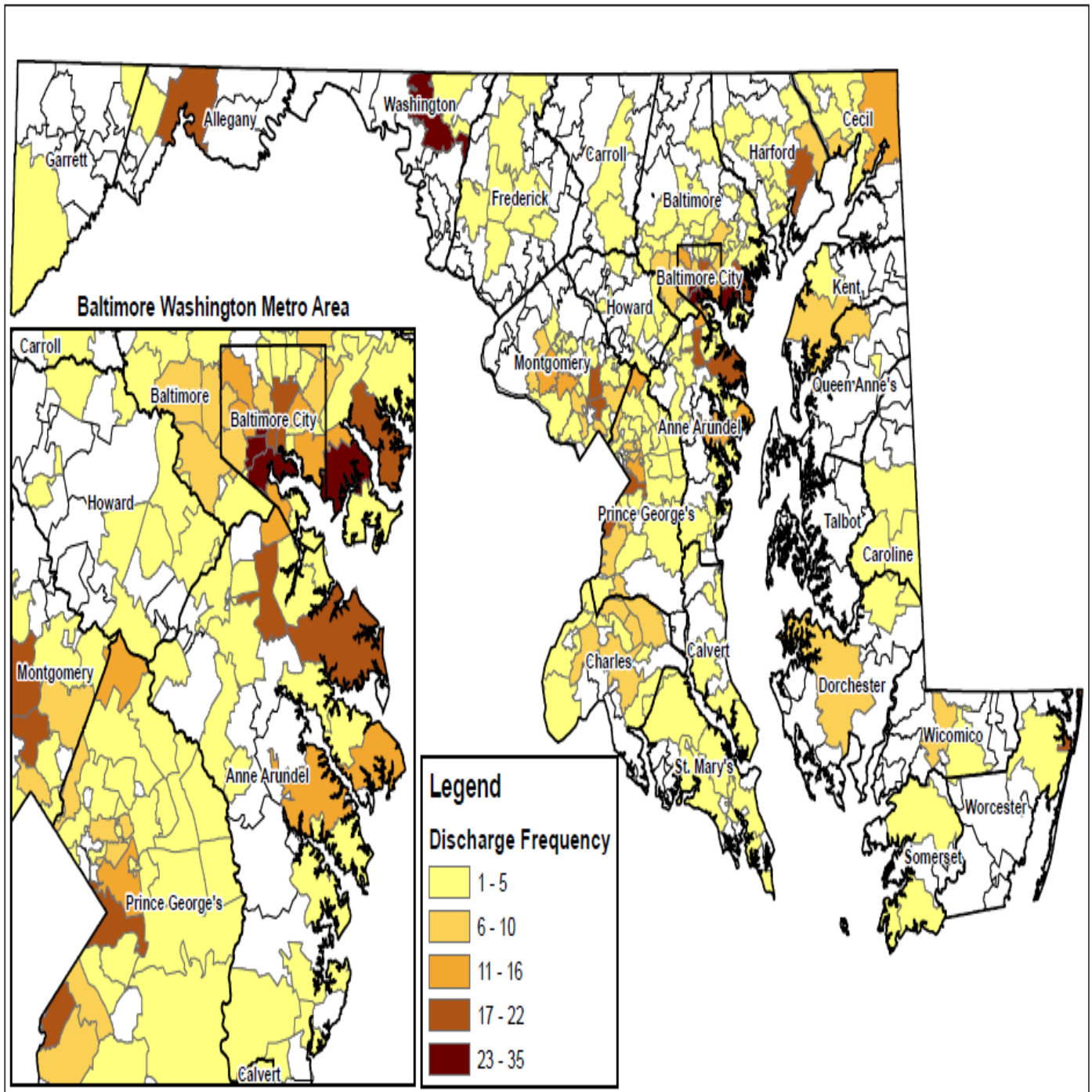
Law Enforcement Electronic Control Device Discharges aimed at Human Targets in 2012 by County



Source: Governor's Office of Crime Control and Prevention
Map Created: August 2013



Law Enforcement Electronic Control Device Discharges aimed at Human Targets in 2012 by Zip Code



Source: Governor's Office of Crime Control and Prevention
Map Created: August 2013



ECD Discharge Date and Time of Day

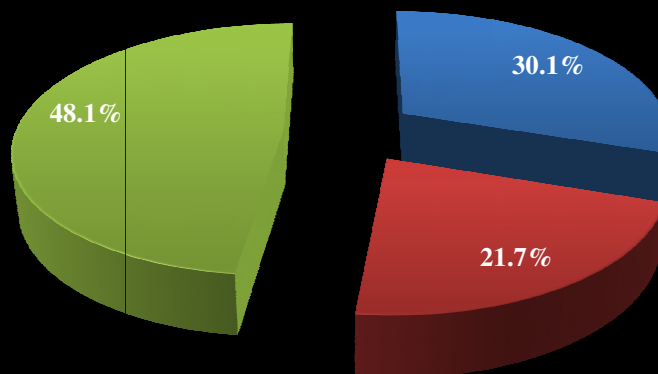
The number of ECD discharges throughout the year by month ranged from 64 discharges in December to 103 discharges in the months of April, June, and August. ECD discharges were most likely to occur during the evening from 1600 hours to 2400 hours (4 pm – 12 am), (48.1%, n = 514), followed by 0000 hours to 0800 hours (12 am – 8 am), (30.1%, n = 322), and 0800 hours to 1600 hours (8 am – 4 pm), (21.7 %, n = 232).

Number of ECD Discharges by Month



Number of ECD Discharges by Shift

■ 0000 hrs - 0800 hrs ■ 0800 hrs - 1600 hrs ■ 1600 hrs - 2400 hrs



Race

Over 95% of people tased were either African American or Caucasian (62.0% and 33.3% respectively); only 3 cases were missing race data. Data reported to MSAC included all ECD discharges per device. Therefore, it is possible for one person to have been tased multiple times or by various devices during an incident. This would be captured as separate ECD discharge incidents in the analysis. This could result in the potential duplication of some race, gender, and age frequencies.

Table 2. Number of ECD Discharges by Race/Ethnicity (n = 1,068)			
Race/Ethnicity	Frequency	Percent	Cumulative Percent
Asian	7	0.7%	0.7%
African American	662	62.0%	62.6%
Hispanic	40	3.7%	66.4%
Caucasian	356	33.3%	99.7%
Unknown	3	0.3%	100.0%
Total	1,068	100.0%	

Gender

The majority (93.7%) of persons targeted with an ECD were male (n = 999); females only represented 6.3% of persons tased (n= 67). Gender data was missing in only 2 discharges.

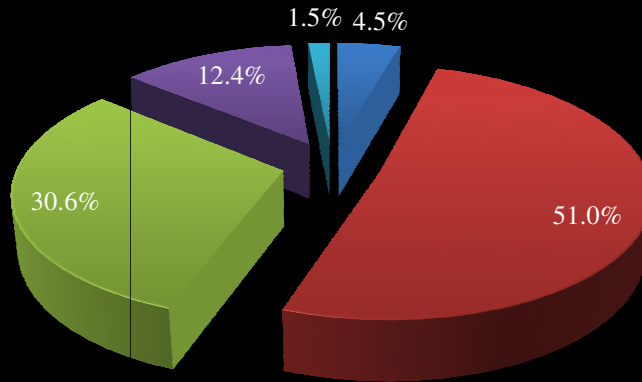
Table 3. Number of ECD Discharges by Gender (n = 1,068)			
Gender	Frequency	Percent	Cumulative Percent
Males	999	93.5%	93.5%
Females	67	6.3%	99.8%
Unknown/Missing	2	0.2%	100.0%
Total	1,068	100.0%	

Age

ECDs were discharged against individuals between the ages of 12 and 78 years old (mean = 31 years, median = 29 years). The majority (80%) of individuals tased were between 18 and 44 years old. As illustrated on the following page, the number of ECD discharges were grouped into five different age brackets for this analysis: 17 years of age or under, 18-30 years of age, 31-44 years of age, 45-60 years of age, and 61 years of age or older. Missing data for a person's age was apparent in 15 cases (1.4%).

Number of ECD Discharges by Age Interval Breakdown

■ 17 yoa or Under ■ 18-30 yoa ■ 31-44 yoa ■ 45-60 yoa ■ 61 yoa or Older

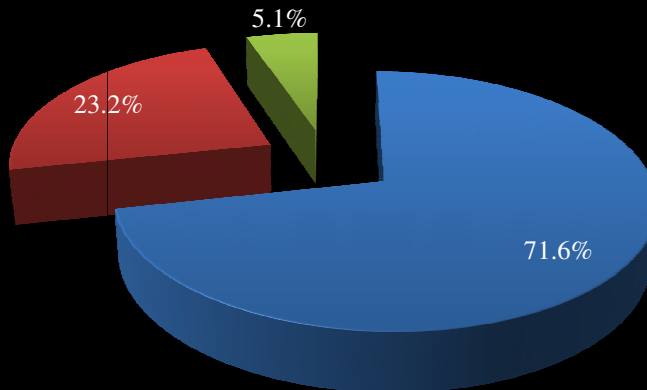


Type of Incident

The type of incident is defined as law enforcement's initial response to the person against whom the ECD was discharged regardless of the reason for the actual discharge. The type of incident resulting in an ECD discharge is classified into three different law enforcement responses: criminal, noncriminal, and traffic. In 2012, almost three-quarters of all ECD discharges were in a response to criminal incidents (71.6%, n = 768), followed by noncriminal incidents (23.2%, n = 248), and during traffic stops (5.1%, n = 55).

Number of ECD Discharges by Incident Type

■ Criminal ■ Noncriminal ■ Traffic



African Americans were more likely to be tased during law enforcement's response to a criminal incident, compared to Caucasians (74.8% and 65.5% respectively). However, Caucasians were more likely to be tased during law enforcement's response to a non-criminal incident (27.2% and 21.1% respectively). A gender-based discrepancy was also identified. During law enforcement's response to criminal incidents, males were more likely (73.1%) than females (50.7%) to be tased. However, an ECD discharge for a noncriminal incident was more likely for females (40.3%) versus males (22%). Age was another important factor that determined the likelihood of an ECD discharge. In fact, older individuals were less likely to be tased during law enforcement's initial response to a criminal event and more likely to be tased during law enforcement's initial response to a non-criminal event.

Table 4. Number of ECD Discharges by Type of Incident and Race/Ethnicity (n = 1,068)

Discharge Type	Asian	African American	Hispanic	Caucasian	Unknown/Missing	Total
Criminal Percent	5 71.4%	495 74.8%	30 75.0%	233 65.5%	2 66.7%	765 71.6%
Noncriminal Percent	1 14.3%	140 21.1%	9 22.5%	97 27.2%	1 33.3%	248 23.2%
Traffic Percent	1 14.3%	27 4.1%	1 2.5%	26 7.3%	0 0.0%	55 5.2%
Total Percent	7 100.0%	662 100.0%	40 100.0%	356 100.0%	3 100.0%	1,068 100.0%

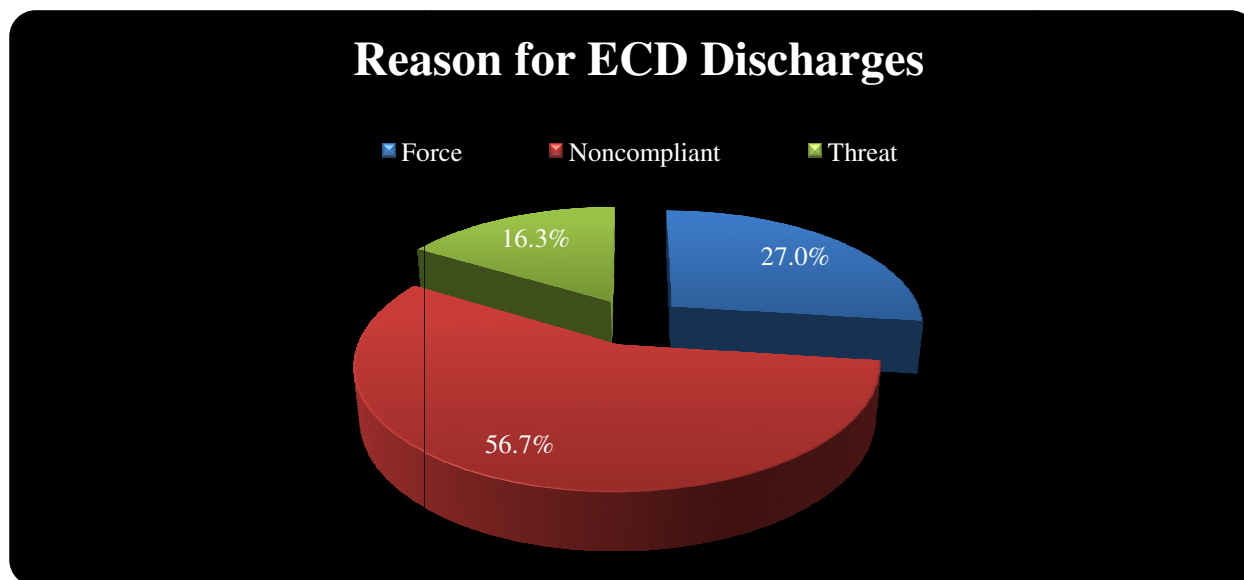
Table 5. Number of ECD Discharges by Type of Incident and Gender (n = 1,068)

Discharge Type	Male	Female	Unknown/Missing	Total
Criminal Percent	730 73.1%	34 50.7%	1 50.0%	765 71.6%
Noncriminal Percent	220 22.0%	27 40.3%	1 50.0%	248 23.3%
Traffic Percent	49 4.9%	6 9.0%	0 %	55 5.1%
Total Percent	999 100.0%	67 100.0%	2 100.0%	1,068 100.0%

Table 6. Number of ECD Discharges by Type of Incident and Age Interval (n = 1,068)							
Discharge Type	17 and under	18-30	31-44	45-60	61 and older	Missing	Total
Criminal Percent	33 70.2%	409 76.2%	225 69.9%	80 61.1%	6 37.5%	12 80.0%	765 100.0%
Noncriminal Percent	13 27.7%	105 19.6%	76 23.6%	42 32.1%	9 56.3%	3 20.0%	248 100.0%
Traffic Percent	1 2.1%	23 4.3%	21 6.5%	9 6.9%	1 6.3%	0 5.2%	55 100%
Total Percent	47 100.0%	537 100.0%	322 100.0%	131 100.0%	16 100.0%	15 100.0%	1,068 100.0%

Reason for the ECD Discharge

ECD discharges occurred most often when the target individual was noncompliant and nonthreatening (56.6%; n = 604), used force (27.0%, n = 288), or threatened to use force (16.3%, n = 174). Missing data on reason for ECD discharges was apparent in 2 cases.



Caucasians were more likely to be tased than African Americans for using force or threatening to use force (33.1% to 22.8% and 21.1% to 13.7% respectively). However, African Americans were more likely to be tased for being noncompliant and nonthreatening (63.3%). Females were more likely to be tased for using force (29.9% compared to 26.8% for males) while males were more likely to be tased for being noncompliant and nonthreatening (56.9% compared to 52.2% for females). Juveniles were most likely to be tased for being noncompliant and nonthreatening (63.8%); whereas, middle aged (e.g., 31 to

45 years of age) men and women were most likely to be tased for using force on law enforcement officers (29.8%).

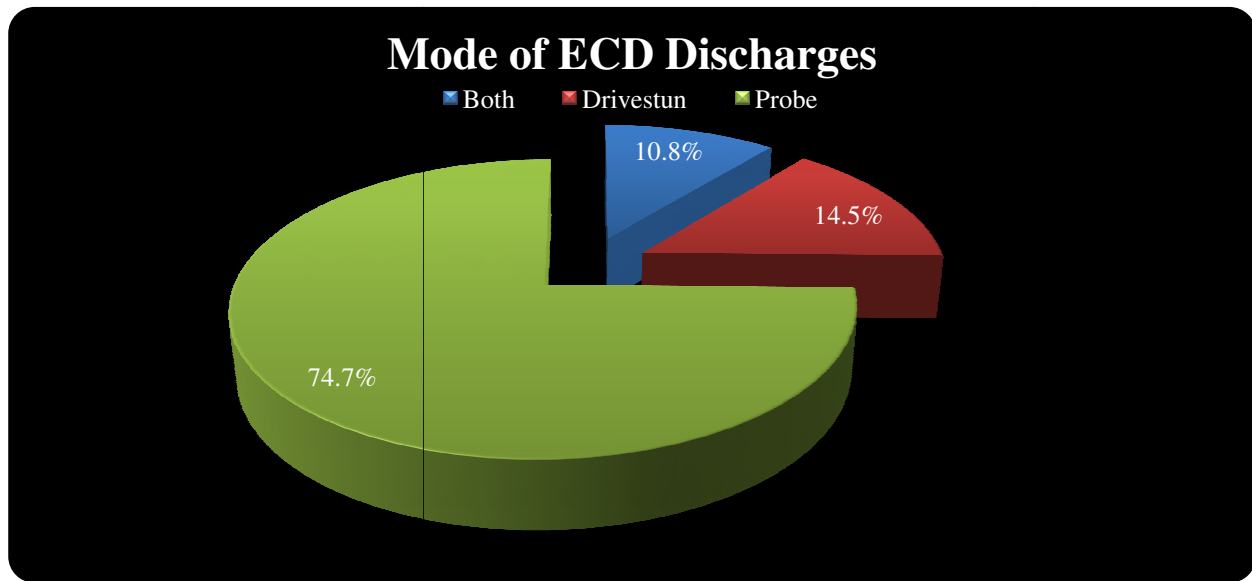
Table 7. Reason for ECD Discharges by Type and Race/Ethnicity (n = 1,068)						
Discharge Reason	Asian	African American	Hispanic	Caucasian	Unknown	Total
Force Percent	0 0.0%	151 22.8%	18 45.0%	118 33.1%	1 33.3%	288 27.0%
Noncompliant Percent	6 85.7%	419 63.3%	15 37.5%	163 45.8%	1 33.3%	604 56.6%
Threat Percent	1 14.3%	91 13.7%	7 17.5%	75 21.1%	0 0.0%	174 16.3%
Missing Percent	0 0.0 %	1 0.2%	0 0.0%	0 0.0%	1 33.3%	2 0.2%
Total Percent	7 100.0%	662 100.0%	40 100.0%	356 100.0%	3 100.0%	1,068 100.0%

Table 8. Reason for ECD Discharges by Type and Gender (n=1,068)				
Discharge Reason	Male	Female	Unknown/Missing	Total
Force Percent	268 26.8%	20 29.9%	0 0.0%	288 27.0%
Noncompliant Percent	588 56.9%	35 52.2%	1 50.0%	604 56.6%
Threat Percent	163 16.3%	11 16.4%	0 %	174 16.3%
Missing Percent	0 0.0 %	1 1.5%	1 50.0%	2 0.2%
Total Percent	999 100.0%	67 100.0%	2 100.0%	1,068 100.0%

Table 9. Reason for ECD Discharges by Type and Age Interval (n = 1,068)							
Discharge Reason	17 and under	18-30	31-44	45-60	61 and older	Missing	Total
Force	11	143	96	33	4	1	288
Percent	23.4%	26.6%	29.8%	25.2%	25.0%	6.7%	27.0%
Noncompliant	30	317	167	72	9	9	604
Percent	63.8%	59.0%	51.9%	55.0%	56.3%	60.0%	56.6%
Threat	5	77	59	26	3	4	174
Percent	10.6%	14.3%	18.3%	19.8%	18.8%	26.7%	16.3%
Missing	1	0	0	0	0	1	2
Percent	2.1%	0.0%	0.0%	0.0%	0.0%	6.7%	0.2%
Total	47	537	322	131	16	15	1,068
Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Mode Used

An ECD discharge can result from various modes: probe mode, drive stun mode, or both. Probe mode occurs when two probes are fired from a disposable cartridge, releasing electrical pulses to the body. This includes any third point of contact. The purpose for this mode is incapacitation by transmitting an electrical current to the central nervous system. Drive stun mode occurs when an ECD is applied directly to the body but does not include a third point of contact discharge. This mode is based on pain compliance. Probe mode was used more frequently (74.6%, n = 797) than drive stun (14.5%, n = 155), or both (10.8%, n=115). Missing data was only apparent in one case.



The type of mode used during an ECD discharge was fairly consistent across race, gender, and age. In fact, no significant differences were found regarding the prevalence of probe mode for race (76.6% for African Americans, 71.9% for Caucasians) or gender (79.1% for females, 74.3% for males); however, individuals who were 61 years old and older were slightly less likely to be tased with a probe mode (62.5%) compared to other age groups. Similarly, no significant differences were found in the pervasiveness of drive stun mode used for race (14.9% for Caucasians, 14% for African Americans) or gender (14.9% for females, 14.9% for males); however, individuals who were 61 years old and older were slightly more likely to be drive stunned (31.3%) compared to other age groups.

Table 10. Mode of ECD Discharges by Type Race/Ethnicity (n = 1,068)						
Mode of ECD Discharge	Asian	African American	Hispanic	Caucasian	Unknown	Total
Probe Percent	3 42.9%	507 76.6%	28 70.0%	256 71.9%	3 100.0%	797 74.6%
Drivestun Percent	3 42.9%	93 14.0%	6 15.0%	53 14.9%	0 0.0%	155 14.5%
Both Percent	1 14.3%	62 9.4%	6 15.0%	46 12.9%	0 0.0%	115 10.9%
Missing Percent	0 0.0%	0 0.0%	0 0.0%	1 0.3%	0 0.0%	1 0.1%
Total Percent	7 100.0%	662 100.0%	40 100.0%	356 100.0%	3 100.0%	1,068 100.0%

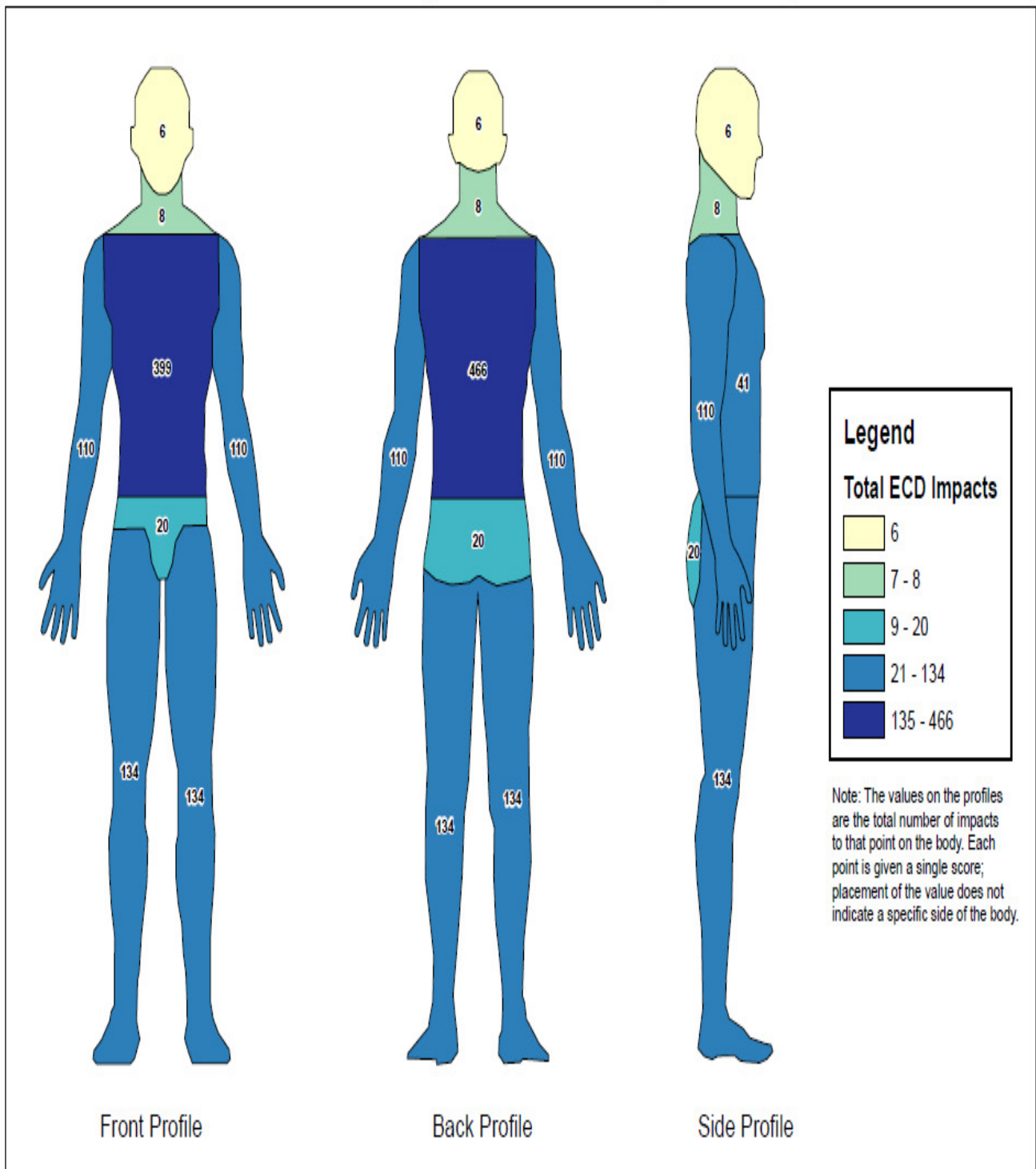
Table 11. Mode of ECD Discharges by Type and Gender (n = 1,068)				
Mode of ECD Discharge	Male	Female	Unknown/Missing	Total
Probe Percent	742 74.3%	53 79.1%	2 100.0%	797 74.6%
Drivestun Percent	145 14.5%	10 14.9%	0 0.0%	155 14.5%
Both Percent	111 11.1%	4 6.0%	0 0.0%	115 10.8%
Missing Percent	1 0.1%	0 0.0%	0 0.0%	1 0.0%
Total Percent	999 100.0%	67 100.0%	2 100.0%	1,068 100.0%

Table 12. Mode of ECD Discharges by Type and Age Grouping (n = 1,068)							
Mode of ECD Discharge	17 and under	18-30	31-44	45-60	61 and older	Missing	Total
Probe	38	391	242	103	10	13	797
Percent	80.9%	72.8%	75.2%	78.6%	62.5%	86.7%	74.6%
Drivestun	7	84	47	12	5	0	115
Percent	14.9%	15.6%	14.6%	9.2%	31.3%	0.0%	10.8%
Both	2	62	33	15	1	2	155
Percent	4.3%	11.5%	10.2%	11.5%	6.3%	13.3	14.5%
Missing	0	0	0	1	0	0	1
Percent	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	100.0%
Total	47	537	322	131	16	15	1,068
Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Point of Impact

The point of impact includes seven parts of the body (i.e., arm, back torso, buttocks, front torso, groin/hip, head, leg, neck, and side), as well as clothing or a missed impact. When an ECD discharge hits a person's clothing and does not affect the body, it is classified as a clothing "point of contact." Similarly, when an ECD discharge misses its intended target, this is considered to be a missed "point of contact." Also, the total "points of impact" do not equal the total number of ECD discharges because some incidents involved multiple points of impact. In fact, 92% of all discharges resulted in at least one point of impact (n = 981, excluding clothing and misses) which totaled 1,203 points of impact (*points of impact are based on exact location of the impact; please see Table 13 for more information*). Approximately 72% of these discharges hit the intended target in the front torso (33.2%, n = 399) or the back torso (38.7%, n = 466). Points of impact in the more sensitive areas of the body (e.g., head, neck, and groin) occurred in less than 3% of all discharges. The points of impact distribution were very similar across the intended targets of all races, gender, and ages.

Law Enforcement Electronic Control Device Discharges aimed at Human Targets in 2012: Count by Point of Impact



Source: Governors Office of Crime Control and Prevention
Washington College GIS
August 2013



Table 13. Point of Impact ECD Discharge Data						
	Point of Impact 1	Point of Impact 2	Point of Impact 3	Point of Impact 4	Totals	Percent
Arm	78	30	1	0	109	9.1%
Back Torso	421	41	3	1	466	38.7%
Buttocks	10	10	0	0	20	1.7%
Front Torso	352	45	2	0	399	33.2%
Groin/Hip	10	10	0	0	20	1.7%
Head	6	0	0	0	6	0.5%
Leg	65	65	4	0	134	11.1%
Neck	6	2	0	0	8	0.7%
Side	32	9	0	0	41	3.4%
Discharges with a Point of Impact	1,068	220	11	2	1,203	100.0%
Clothing	8	3	0	0	11	0.8%
Miss	80	5	1	1	87	6.7%
Total Discharges	1,068	220	11	2	1,301	100.0%

ECD Cycles

Three variables were captured to measure ECD cycles. The first variable measured the number of ECD cycles used per discharging incident. For example, every recorded ECD cycle was analyzed by MSAC to capture the duration of each cycle in seconds. If there were multiple cycles in an ECD discharge, the length (in seconds) between cycles was also captured. The only ECD brand used by law enforcement agencies in Maryland is Taser International Inc. which provides records for every discharge including the cycle information used in this analysis. The number of ECD cycles per discharge ranged from 1 to 23 (mean = 1.89 cycles, median = 1.0 cycles), and the duration of each cycle ranged from 0 to 50 seconds (mean = 4.94 seconds, median = 5 seconds). The most common duration of a cycle lasted five seconds which occurred in over 75% of all cycles. The standard ECD cycle from a Taser International Inc. device occurs for five seconds when the trigger is pressed. Therefore, in order to increase the duration of an ECD cycle, a manual override would need to occur to lengthen or shorten the duration. The duration between cycles ranged from 0 seconds to 309 seconds, excluding two outliers of 1,800 and 941 seconds (mean = 14.43 seconds median = 7 seconds).

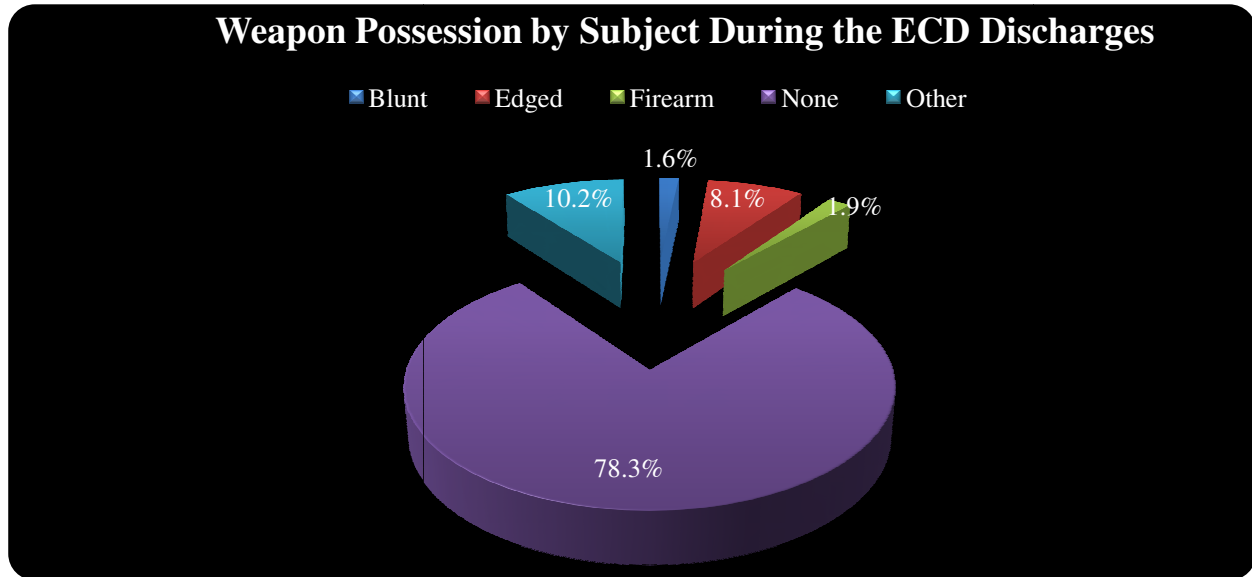
As illustrated below, there was no significant difference in the number of cycles, duration of cycles, or duration between cycles when cross tabbed by race. In fact, Caucasians and African Americans showed an exact median for all categories (1.00 cycles, 5.00 seconds, and 7.00 seconds respectively). However, the duration between ECD cycles was longer for females who were tased compared to males (8.50

seconds compared to 7.00 seconds). Also, the duration between ECD cycles was slightly shorter for juveniles, compared to other age groups (3.50 seconds between cycles).

Table 14. Number, Duration, and Duration Between Cycles by Race, Gender, and Age Grouping (n = 1,068)				
ECD Data Distribution	Mean and Median	Number of ECD Cycles	Duration of ECD Cycles (in seconds)	Duration between ECD Cycles (in seconds)
RACE				
Asian	Mean	1.43	7.50	2.00
n = 7	Median	1.00	5.00	2.00
African American	Mean	1.93	4.91	14.69
n = 662	Median	1.00	5.00	7.00
Hispanic	Mean	1.82	4.83	11.13
n = 40	Median	1.00	5.00	7.00
Caucasian	Mean	1.84	4.99	14.41
n = 356	Median	1.00	5.00	7.00
Unknown/Missing	Mean	2.00	4.50	6.00
n = 3	Median	2.00	2.00	6.00
GENDER				
Female	Mean	1.79	4.46	22.88
n = 67	Median	1.00	5.00	8.50
Male	Mean	1.90	4.98	13.94
n = 999	Median	1.00	5.00	7.00
Unknown/Missing	Mean	1.00	1.00	1.00
n = 2	Median	1.00	1.00	1.00
AGE GROUPING				
17 and under	Mean	1.28	5.31	3.21
n = 47	Median	1.00	5.00	3.50
18-30	Mean	1.85	4.87	15.49
n = 537	Median	1.00	5.00	7.00
31-44	Mean	1.98	5.12	13.32
n = 322	Median	1.00	5.00	7.00
45-60	Mean	2.07	4.82	15.96
n = 131	Median	1.00	5.00	6.00
61 and older	Mean	1.69	4.63	7.82
n = 16	Median	1.50	5.00	5.00
Unknown/Missing	Mean	2.13	4.40	9.00
n = 15	Median	1.00	5.00	6.00
Combined Total	Mean	1.89	4.94	14.43
n = 1,068	Median	1.00	5.00	7.00

Weapon Possession

Possession of a weapon was included in the analysis of this report to capture the type of weapon (if any) that was on the person being tased at the time of the incident. Of the total number of ECD discharges (n = 1,068), the target individual possessed a weapon approximately 22% of the time (n = 232). If a weapon was possessed, the most common type was other weapons (10.2%, n = 109), edged weapons (8.1%, n = 86), firearms (1.9%, n = 20), or blunt force weapons (1.6%, n = 17).



Caucasians were more likely to possess a weapon, compared to African Americans (24.2% to 19.8%). In fact, if a weapon was possessed, Caucasians were more likely to have an edged weapon (12.9% to 5.3%); whereas, African Americans were more likely to have a weapon classified as other (11.3% to 7.6%). Females were more likely to have a weapon on their possession at the time of being tased, compared to males (29.9% to 21.2%); however, no females possessed firearms during an ECD discharge incident. With regards to age, juveniles were slightly more likely to possess a weapon when tased, compared to other age groups (34.0%)

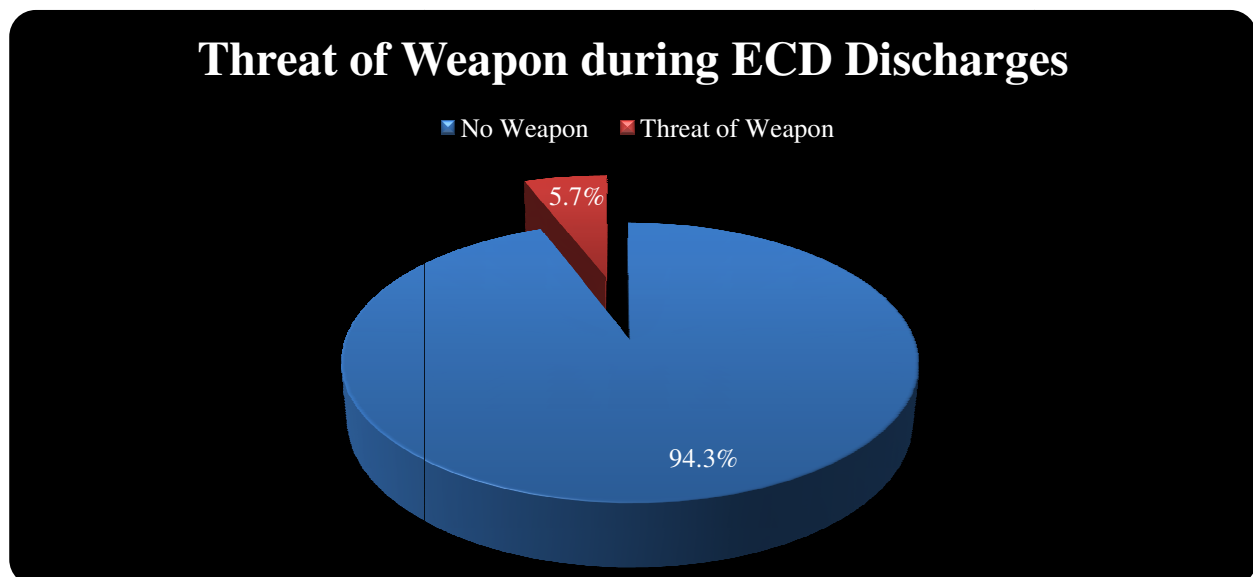
Table 15. Weapon Possession at the time of an ECD Discharge by Type and Race/Ethnicity (n = 1,068)						
Weapon Possessed	Asian	African American	Hispanic	Caucasian	Unknown	Totals
Blunt Percent	0 0.0%	11 1.7%	1 2.5%	5 1.4%	0 0.0%	17 1.6%
Edged Percent	0 0.0%	35 5.3%	5 12.5%	46 12.9%	0 0.0%	86 8.1%
Firearm Percent	2 28.6%	10 1.5%	0 0.0%	8 2.2%	0 0.0%	20 1.9%
None Percent	5 71.4%	531 80.2%	27 67.5%	270 75.8%	3 100.0%	836 78.3%
Other Percent	0 0.0%	75 11.3%	7 17.5%	27 7.6%	0 0.0%	109 10.2%
Totals Percent	7 100.0%	662 100.0%	40 100.0%	356 100.0%	3 100.0%	1,068 100.0%

Table 16. Weapon Possession at the time of an ECD Discharge by Gender (n = 1,068)				
Weapon Possessed	Male	Female	Missing	Total
Blunt Percent	13 1.3%	4 6.0%	0 0.0%	17 1.6%
Edged Percent	78 7.8%	8 11.9%	0 0.0%	86 8.1%
Firearm Percent	20 2.0%	0 0.0%	0 0.0%	20 1.9%
None Percent	787 78.8%	47 70.1%	2 100.0%	836 78.3%
Other Percent	101 10.1%	8 11.9%	0 0.0%	109 10.2%
Total Percent	999 100.0%	67 100.0%	2 100.0%	1,068 100.0%

Table 17. Weapon Possession at the time of an ECD Discharge by Type and Age Grouping (n = 1,068)							
Weapon Possessed	17 and under	18-30	31-44	45-60	61 and older	Missing	Total
Blunt Percent	1 2.1%	4 0.7%	9 2.8%	3 2.3%	0 0.0%	0 0.0%	17 1.6%
Edged Percent	6 12.8%	37 6.9%	24 7.5%	17 1.3%	2 12.5%	0 0.0%	86 8.1%
Firearm Percent	1 2.1%	14 2.6%	4 1.2%	0 0.0%	0 0.0%	1 6.7%	20 1.9%
None Percent	31 66.0%	432 80.4%	248 77.0%	98 74.8%	14 87.5%	13 86.6%	836 78.3%
Other Percent	8 17.0%	50 9.3%	37 11.5%	13 9.9%	0 0.0%	1 6.7%	109 10.2%
Totals Percent	47 100.0%	537 100.0%	322 100.0%	131 100.0%	16 100.0%	15 100.0%	1,068 100.0%

Threat of Weapon

Of ECD discharge incidents where no weapon was present, MSAC analyzed whether a threat of a weapon occurred. Law enforcement may assume a threat exists based on a verbal threat or other indication, based on a person's actions (e.g., does not remove hands from pockets). Of the 836 ECD discharge incidents where a weapon was not possessed, a threat of a weapon only occurred during 5.7% of the incidents (n = 48).



A threat of a weapon was more likely to occur during an ECD discharge for Caucasians, compared to African Americans (7.8% compared to 4.3% of the incidents). There was no significant difference between the threat of a weapon, based on the gender of individual (males 5.8% and females 4.3%). Juveniles were the least likely to show a threat of a weapon during an ECD discharge (3.2%); whereas, individuals who were 61 and older (7.1%) and middle aged males and females who were 31-44 (8.5%) were more likely to show a threat of a weapon during an ECD discharge incident.

Table 18. Threat of a Weapon During an ECD Discharge by Race/Ethnicity (n = 836)

Threat of a Weapon During ECD Discharges	Asian	African American	Hispanic	Caucasian	Unknown	Total
No	4	508	24	249	3	788
Percent	80.0%	95.7%	88.9%	92.2%	100.0%	94.3%
Yes	1	23	3	21	0	48
Percent	20.0%	4.3%	11.1%	7.8%	0.0%	5.7%
Total	5	531	27	270	3	836
Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 19. Threat of a Weapon During an ECD Discharge by Gender (n = 836)

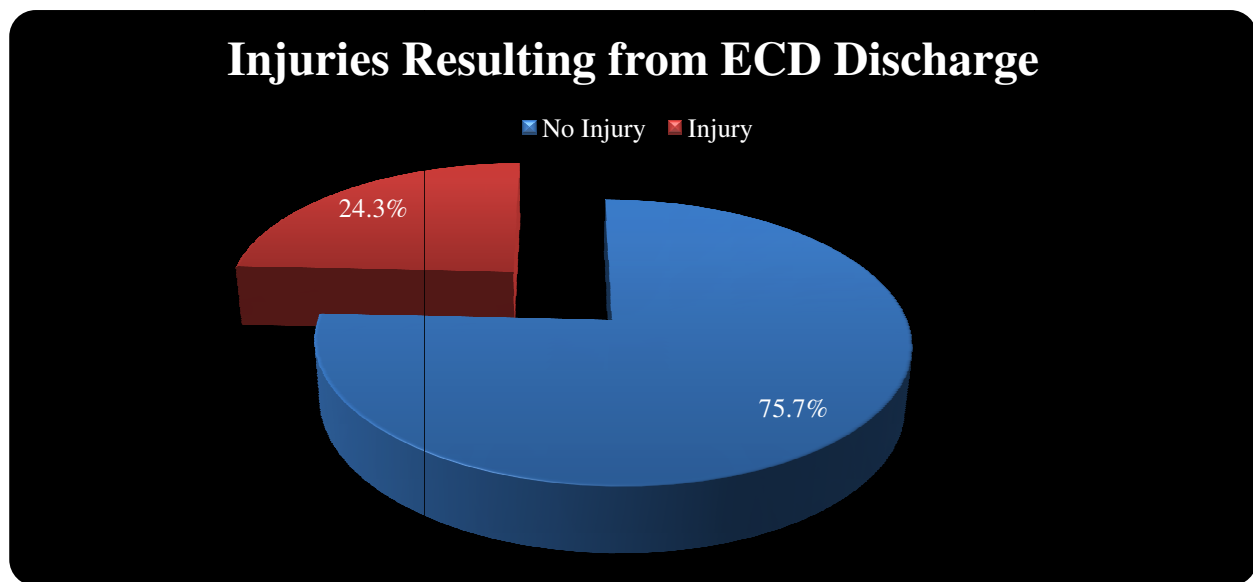
Threat of a Weapon During ECD Discharges	Male	Female	Missing/Unknown	Total
No	741	45	2	788
Percent	94.2%	95.7%	100.0%	94.3%
Yes	46	2	0	48
Percent	5.8%	4.3%	0.0%	5.7%
Total	787	47	2	836
Percent	100.0%	100.0%	100.0%	100.0%

Table 20. Threat of a Weapon During an ECD Discharge by Age Grouping (n = 836)

Threat of a Weapon During ECD Discharges	17 and under	18-30	31-44	45-60	61 years and older	Missing	Total
No	30	413	227	92	13	13	788
Percent	96.8%	95.6%	91.5%	93.9%	92.9%	100.0%	94.3%
Yes	1	19	21	6	1	0	48
Percent	3.2%	4.4%	8.5%	6.1%	7.1%	0.0%	5.7%
Total	31	432	248	98	14	13	836
Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Deaths and Injuries

Deaths and injuries resulting from an ECD discharge exclude deaths or injuries from punctures or lacerations caused by ECD contact or the removal of ECD probes. No deaths occurred from a direct result of an ECD discharge in 2012; however injuries occurred in almost 25% of all ECD discharges (n = 259). Missing data was apparent for one injury incident.



There were no significant differences in the likelihood of being injured after being tased across race (Caucasians 26.7%, African American 22.4%) and gender (males 24.4%, females 22.4%). However, individuals who were 61 years old and older, and juveniles were most likely to be injured as a result of being tased (37.5% and 29.8% respectively) than the other age brackets.

Table 21. Injuries Reported From an ECD Discharge by Race/Ethnicity (n = 1,068)

Injuries Reported	Asian	African American	Hispanic	Caucasian	Unknown	Total
Missing	0	0	0	0	0	1
Percent	0.0%	0.0%	0.0%	0.3%	0.0%	0.1%
No	4	514	28	260	2	808
Percent	57.1%	77.6%	70.0%	73.0%	66.7%	75.7%
Yes	3	148	12	95	1	259
Percent	42.9%	22.4%	30.0%	26.7%	33.3%	24.2%
Total	7	662	40	356	3	1,068
Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 22. Injuries Reported from an ECD Discharge by Gender (n = 1,068)

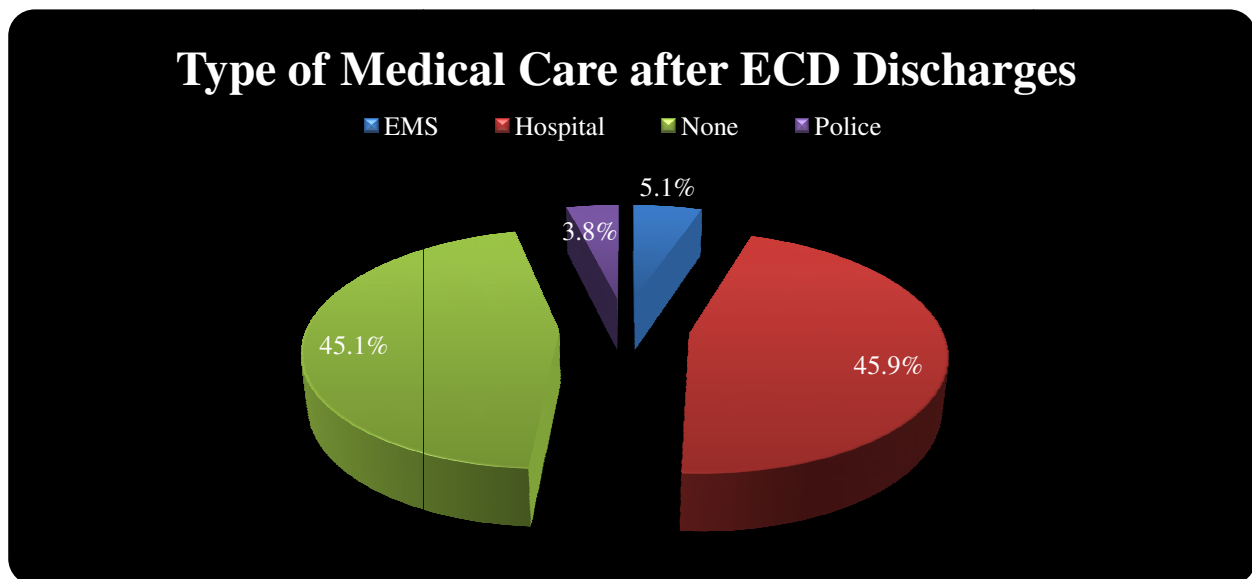
Injuries Reported	Male	Female	Missing/Unknown	Total
Missing	1	0	0	1
Percent	0.1%	0.0%	0.0%	0.1%
No	754	52	2	808
Percent	75.5%	77.6%	100.0%	75.7%
Yes	244	15	0	259
Percent	24.4%	22.4%	0.0%	24.3%
Total	999	67	2	1,068
Percent	100.0%	100.0%	100.0%	100.0%

Table 23. Injuries Reported from an ECD Discharge by Age Grouping (n = 1,068)

Injuries Reported	17 and under	18-30	31-44	45-60	61 years and older	Missing	Total
Missing	0	0	1	0	0	0	1
Percent	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.1%
No	33	404	249	99	10	13	808
Percent	70.2%	75.2%	77.3%	75.6%	62.5%	86.7%	75.7%
Yes	14	133	72	32	6	2	259
Percent	29.8%	24.8%	22.4%	24.4%	37.5%	13.3%	24.3%
Total	47	537	322	131	16	15	1,068
Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Medical Care

MSAC analyzed the type of medical care needed for individuals who were tased. This excludes medical care resulting from treatment of punctures or lacerations caused by ECD contact or the removal of ECD probes. The results show that individuals who were tased received hospital care 45.9% of the time, followed by no additional medical care (45.1%), EMS care (5.1%), and police care (3.8%). However, these percentages may not represent an accurate portrayal of medical care provided because this was not consistently reported by all agencies, using the given definition. Some agencies included hospital care for all discharges regardless of whether additional treatment beyond the standard procedure to treat puncture or lacerations occurred. Given this observation, MSAC is not confident that the medical care data provided by law enforcement accurately captures the ECD discharge incidents in which additional medical care was provided. In fact, the number of ECD discharge incidents where additional medical was provided appears to be inflated.



DISCUSSION AND RECOMMENDATIONS

This report provides an overview of law enforcement ECD discharges in the State of Maryland for calendar year 2012. ECD discharges were most likely to occur in densely populated areas during the evening hours. The majority of discharges occurred during law enforcement's initial response to a criminal incident and when a person failed to comply with law enforcement officer orders. Probe mode was most commonly used during an ECD discharge in which a person's center mass (i.e., front and back torso) was the most frequent a point of impact. There were very few ECD discharges that made contact with more sensitive areas of the body (i.e., head, neck, and groin). On average, an ECD discharge incident only involved one five second cycle. However, if more than one cycle did occur, the person was given approximately seven seconds (on average) to recover before another electrical current made

contact. Persons who were tased possessed a weapon less than 20% of the time and showed a threat of a weapon less than 6% of the time. No deaths resulted from an ECD discharge in 2012; however, injuries resulting from a taser discharge occurred in slightly less than 25% of the incidents. Approximately half of the individuals who were tased received additional medical care.

African Americans and Caucasians represented over 95% of the individuals who were tased. Overall, African Americans were more likely to be tased during law enforcement's initial response to a criminal incident, and were more likely to be noncompliant and nonthreatening; whereas, Caucasians were tased more often during a response to a noncriminal incident and were more likely to have used, or threatened to use force on law enforcement officers. A weapon was possessed more often during ECD discharge incidents by Caucasians who were also more likely to pose the threat of a weapon, compared to African Americans. There were no differences in the type of mode used, point of impact, or frequency of injuries among the two races.

Males comprise almost 95% of persons who were tased. Males were more likely to be tased during an initial response to a criminal incident and were more threatening and non-complaint with officers compared to females. Although females were more likely to be tased during law enforcement's initial response to a non-criminal incident, females were also more likely to use force on officers prior to being tased. It seems as though females are given a slightly longer time to recover from the initial ECD discharges if multiple cycles were used in an incident. Females were more likely to possess a weapon (other than a firearm) than males when they were tased. Again, there were no differences in the type of mode used, point of impact, or frequency of injuries by gender.

Over 80% of people tased were between the ages of 18 and 44. Generally, older individuals were tased more often during law enforcement's initial response to a noncriminal incident; whereas, juveniles were tased most often for being non-complaint and nonthreatening. Middle aged men and women were most likely to use force while being tased. Individuals who were 61 years old and older were slightly more likely to be tased with drive stun rather than probe mode. Juveniles who were tased were more likely to possess a weapon than other age groups. When comparing age groups, no significant differences were made with regards to the point of impact or frequency of injuries.

Data regarding threat of a weapon, injury, or fatality were reported to MSAC in a format consisting of "yes" or "no." Law enforcement was not required to report the situation or reason surrounding these occurrences. One limitation pertaining to the current study resulted from agency responses to "medical care". Some agencies selected hospital care for all discharges regardless of whether additional treatment beyond the standard procedure to treat puncture or lacerations occurred. As a result, data pertaining to the frequency of additional medical care received appears to be inflated. MSAC will contact law enforcement to ensure the accurate reporting of this variable for future years of the report. For incidents in which a weapon was possessed, it was unclear whether law enforcement saw a weapon on an individual prior to discharging an ECD, or located it after the fact.

This represents the first State report on ECD usage by law enforcement and MSAC is committed to strengthening communication with law enforcement agencies to facilitate the collection of data, revise

and/or add data fields (as needed), and improve the ECD reporting methodology to better capture the scope of ECD discharge incidents in Maryland.